IN THE CLAIMS:

Please amend the claims as follows:

Claims 1-4 (Canceled)

5. (Currently amended) User interaction system ~~as claimed in claim 3~~, comprising:

an electrical apparatus;

a portable pointing device operable by a user for pointing to a region in space;

a camera taking a picture; and

a digital signal processor, capable of receiving and processing the picture, recognizing an object in the region, and transmitting user interface information derived from the picture to the electrical apparatus,

wherein the camera is connected to the pointing device so that in operation it images the region pointed to;

wherein the digital signal processor has an object characterizing means for characterizing an object or part of the object present in the picture of the region imaged by the camera, by providing first object characterizing features to object identification means for identifying the object, and which object identification means is capable of outputting object identification data from which the user interface information is constructed; and,

wherein the digital signal processor includes identification improvement means, which are capable of further improving a probability that the object represented as object identification data, and user interaction command represented as command identification data, are more reliably identified based on predetermined rules, yielding more reliable user interface information.

6. (Previously Presented) User interaction system as claimed in claim 5, wherein the predetermined rules comprise probabilistic calculation of the likelihood at least one of object identification data and command identification data, taking into account a priori known information

units selected from the group consisting of room in which the pointing device resides, previous command issued by user, statistical frequency that a user issues a particular command, time of the day, and combinations thereof.

7. (Currently amended) User interaction system ~~as claimed in claim 3~~, comprising:

an electrical apparatus;

a portable pointing device operable by a user for pointing to a region in space;

a camera taking a picture; and

a digital signal processor, capable of receiving and processing the picture, recognizing an object in the region, and transmitting user interface information derived from the picture to the electrical apparatus,

wherein the camera is connected to the pointing device so that in operation it images the region pointed to;

wherein the digital signal processor has an object characterizing means for characterizing an object or part of the object present in the picture of the region imaged by the camera, by providing first object characterizing features to object identification means for identifying the object, and which object identification means is capable of outputting object identification data from which the user interface information is constructed;

wherein the digital signal processor includes object association means for providing to the object identification means object association data selected from the group consisting of associated object characterizing features, object related data, and combinations thereof;

wherein the object association data is derivable from object template data in object memory originating from at least one of the methods:

the object template data is obtained from object training means performing a predetermined calculation on second object characterizing features outputted by the object characterizing means; and

the object template data is derived from inputted object data.

8. (Currently amended) User interaction system ~~as claimed in claim 4~~, comprising:

an electrical apparatus;

a portable pointing device operable by a user for pointing to a region in space;

a camera taking a picture; and

a digital signal processor, capable of receiving and processing the picture, recognizing an object in the region, and transmitting user interface information derived from the picture to the electrical apparatus,

wherein the camera is connected to the pointing device so that in operation it images the region pointed to.

wherein the digital signal processor comprises:

motion trajectory estimation means for estimating a motion trajectory of the pointing device and outputting a first motion characterizing signature, a signature being a mathematical abstraction of the motion trajectory; and

signature identification means for identifying the first motion characterizing signature and outputting command identification data, which represents a user interaction command, corresponding with the first motion characterizing signature, from which command identification data the user interface information is constructed;

wherein the digital signal processor includes signature association means for providing to the signature identification means signature association data selected from the group consisting of associated signature features, command related data, and combinations thereof;

wherein the signature association data is derivable from signature template data in signature memory originating from at least one of the methods:

the signature template data is obtained from signature training means performing a predetermined calculation on a second motion characterizing signature outputted by the motion trajectory estimating means; and

the command template data is derived from inputted command data.

Claims 9-72 (Canceled)